



### Single-Phase AC

The Watt's Law formulas for DC circuits also apply to single-phase (1 $\phi$ ) AC circuits containing only resistance.

If inductance or capacitive reactance puts the circuit out of phase, the power factor must be added to the basic power formula:

$$P = I \times E \times PF$$

### Three-Phase AC

The formula for a three-phase (3 $\phi$ ) system includes another term called the "three-phase factor", which is a constant equal to the square root of 3, or 1.73.

$$P_{3\phi} = I \times E \times PF \times 1.73$$

### Transformer

